REMARKS

This application has been carefully reviewed in light of the Office Action dated July 27, 2006. Claims 13 and 22 have been cancelled herein, without prejudice or disclaimer of subject matter. Claims 1-12, 14-21, and 23-32 remain in the application, of which claims 1, 14, 15, 17, 19-21, 23-28, including independent claims 1, 17 and 28, have been amended. Reconsideration and further examination are respectfully requested.

Initially, the Applicants' undersigned representative thanks Examiner Chavis for the thoughtful courtesies and kind treatment afforded during the personal interview conducted on October 11, 2006. In the interview, the substance of dependent claims 13 and 22 was discussed, with the Applicants asserting that the applied art does not disclose at least the features that actual tasks within the first plurality of tasks are expressed as first vertices within a first matrix having values determined by actual dependencies between the tasks within the first plurality of tasks, and virtual tasks with the abstracted workflow are expressed as second vertices within a second matrix having values determined by virtual dependencies between the virtual tasks within the abstracted workflow. Although no agreement regarding allowability of these claims was reached, the Examiner indicated that he would further consider the Applicants' arguments, the discussed features, and the applied art, in the Applicants' written reply.

In the Office Action, claims 1-32 were rejected under 35 U.S.C. § 102(a) over Aissi, S. et al, "E-Business Process Modeling: The Next Big Step," IEEE Computer Journal, Vol. 35, No. 5, May 2002, pp. 55-62 ("Aissi"), which was submitted by the Applicants in the Information Disclosure Statement dated July 14, 2005. As indicated above, claims 13 and 22 have been cancelled herein, without prejudice or disclaimer of subject matter, and without conceding the correctness of the rejection. Furthermore, independent claims 1, 17 and 28 have been amended to further include the substance of cancelled dependent claims 13 and 22, particularly the features that *i)* actual tasks within the first plurality of tasks are expressed as first vertices within a first matrix, where values of the first vertices within the first matrix are determined by actual dependencies between the tasks within the first plurality of tasks, and *ii)* virtual tasks within the

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abstracted workflow are expressed as second vertices within a second matrix, where values of the second vertices within the second matrix are determined by virtual dependencies between the virtual tasks within the abstracted workflow. Withdrawal of the § 102 rejection and further examination are respectfully requested.

The present disclosure is generally directed to the modification of an abstraction level of a workflow, in which a workflow is analyzed to determine a first plurality of tasks, and actual tasks within the first plurality of tasks are expressed as first vertices within a first matrix, where values of the first vertices within the first matrix are determined by actual dependencies between the tasks within the first plurality of tasks. Additionally, the first plurality of tasks are combined into a first virtual task within an abstracted workflow, and virtual tasks within the abstracted workflow are expressed as second vertices within a second matrix, where values of the second vertices within the second matrix are determined by virtual dependencies between the virtual tasks within the abstracted workflow. Moreover, the first virtual task is linked to the first plurality of tasks such that a virtual execution of the abstracted workflow corresponds to an actual execution of the workflow.

Referring to particular claim language, independent claim 1 recites a computer-implemented method of modifying an abstraction level of a workflow. The method includes analyzing a workflow to determine a first plurality of tasks and expressing actual tasks within the first plurality of tasks as first vertices within a first matrix, where values of the first vertices within the first matrix are determined by actual dependencies between the tasks within the first plurality of tasks. The method further includes combining the first plurality of tasks into a first virtual task within an abstracted workflow and expressing virtual tasks within the abstracted workflow as second vertices within a second matrix, where values of the second vertices within the second matrix are determined by virtual dependencies between the virtual tasks within the abstracted workflow. In addition, the method includes linking the first virtual task to the first plurality of tasks such that a virtual execution of the abstracted workflow corresponds to an actual execution of the workflow.

Independent claims 17 is directed to a storage medium, corresponding to method claim 1.

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Independent claim 28 recites workflow model that includes a workflow having a first task and a second task, the first and second tasks expressed as first vertices within a first matrix having values determined by actual dependencies between the first and second tasks. The workflow model further includes a workflow view corresponding to the workflow and comprising a first virtual task expressed as a second vertex within a second matrix having values determined by virtual dependencies between virtual tasks within the workflow view. In addition, the workflow model includes a first dependency between a first execution of the first task and a virtual execution of the first virtual task, and a second dependency between a second execution of the second task and the virtual execution of the first virtual task.

The applied art is not seen to disclose, teach, or to suggest the foregoing features recited by the independent claims. In particular, Aissi is not seen to disclose at least the features that *i)* actual tasks within the first plurality of tasks are expressed as first vertices within a first matrix, where values of the first vertices within the first matrix are determined by actual dependencies between the tasks within the first plurality of tasks, and *ii)* virtual tasks within the abstracted workflow are expressed as second vertices within a second matrix, where values of the second vertices within the second matrix are determined by virtual dependencies between the virtual tasks within the abstracted workflow.

In more detail, Aissi describes a process coordination framework for web services, which outlines the building blocks required for e-business automation, where the framework of Aissi is intended to help in understanding the roles of various standards and in identifying overlaps, gaps, and opportunities for convergence. *See* Aissi, pg. 55. More specifically, the framework of Aissi groups features required for e-business automation along with relevant standards or specifications into a multilayered stack. *See* Aissi, Figure 1, p. 55; "Process Coordination Framework" section, pp. 55-56.

While Aissi is understood to suggest an abstract representation of general e-business automation, Aissi is not seen to disclose, teach or suggest modifying an abstraction level of an actual workflow as applied in a specific firm or organization. Thus, while it is true that Aissi explains that the 'transition' attribute in the Web Services Conversation Language (WSCL) can

define ordering between two processes, it is also true that Aissi does not specify the use of matrices to represent either actual tasks or virtual tasks. *See* Aissi, pg. 57. Accordingly, Aissi is not seen to disclose at least the features that *i)* actual tasks within the first plurality of tasks are expressed as first vertices within a first matrix, where values of the first vertices within the first matrix are determined by actual dependencies between the tasks within the first plurality of tasks, and *ii)* virtual tasks within the abstracted workflow are expressed as second vertices within a second matrix, where values of the second vertices within the second matrix are determined by virtual dependencies between the virtual tasks within the abstracted workflow.

Based on the foregoing amendments and remarks, independent claims 1, 17 and 28 are believed to be allowable over the applied reference. The other rejected claims in the application are each dependent from the independent claims and are believed to be allowable over the applied reference for at least the same reasons. Because each dependent claim is deemed to define additional aspects, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

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No fees are believed to be due at this time. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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